



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/242,191	05/17/1999	MICHEL RIERA	144-198	9738

23973 7590 04/01/2002

DRINKER BIDDLE & REATH  
ONE LOGAN SQUARE  
18TH AND CHERRY STREETS  
PHILADELPHIA, PA 19103-6996

EXAMINER

TRAN, THAO T

ART UNIT	PAPER NUMBER
----------	--------------

1741

DATE MAILED: 04/01/2002

18

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/242,191

Applicant(s)

RIERA, MICHEL

Examiner

Thao T. Tran

Art Unit

1741

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Prosecution Application*

1. The request filed on October 12, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/242,191 is acceptable and a CPA has been established. An action on the CPA follows.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson (US Pat. 4,865,747).

In regards to claims 19 and 32, Larson teaches a method for generating a magnetic field moving in at least one magnetic field plane located in a given medium (fluid); comprising the generating of a first and a second magnetic fields in the same or different magnetic field planes, wherein the magnetic fields vary in direction and amplitude (see Figs. 1-3, 6; col. 1, lines 11-19).

Although Larson is silent with respect to a predefined angle between the directions of the first and second magnetic fields and the reference does not specifically teach varying the amplitude of at least one of the first and second magnetic fields over time in such a manner that the resultant of the first and second magnetic fields is a magnetic field moving in the field plane

giving an amplitude which is variable over time and a direction moving at a variable angular velocity, it has been within the skill in the art that adjusting the positions of parts to define an angle between the directions of the magnetic fields or varying the amplitude of a magnetic over time would have been determined by optimization through routine experimentation, depending upon user's preference and intended use, because Larson teaches that the magnetic fields must vary in direction and amplitude for the treatment to be effective (see col. 1, lines 11-19; col. 8, lines 40-58). See In re Boesch, 205 USPQ 215 (CCPA 1980); In re Antonie, 195 USPQ 6 (CCPA 1977); In re Aller, 105 USPQ 233, 235 (CCPA 1955).

In regards to claims 20-21 and 33-34, Larson teaches the use of a permanent magnet (ferromagnetic core) to generate the first magnetic field and a coil to generate the second magnetic field and varying the frequency of the current over time (see abstract; Figs. 1-3, 6). Although Larson does not teach varying the intensity of current over time, it has been within the skill in the art that varying current intensity would have been an obvious design choice, determined by optimization through routine experimentation, depending upon user's preference and intended use. See In re Boesch, 205 USPQ 215 (CCPA 1980); In re Antonie, 195 USPQ 6 (CCPA 1977); In re Aller, 105 USPQ 233, 235 (CCPA 1955).

In regards to claims 22-23 and 35-36, although Larson does not teach the currents to be sinusoidal, it has been known within the skill in the art to use sinusoidal currents in generating a magnetic field.

In regards to claims 24 and 26, although Larson teaches the generating of one magnetic field by means disposed on the exterior and another inside of the pipe (see Figs. 1-3, 6) instead of

both means being disposed inside or outside of the pipe; it has been within the skill in the art that rearrangement of parts would have little patentable weight, absence of evidence to the contrary.

In regards to claims 25, 27, and 37, although Larson does not teach a specific angle between the direction of the fluid flow and the magnetic field, specific angle would have been an obvious design choice, determined by optimization through routine experimentation, depending upon operating conditions, and user's preference and intended use. See In re Boesch, 205 USPQ 215 (CCPA 1980); In re Antonie, 195 USPQ 6 (CCPA 1977); In re Aller, 105 USPQ 233, 235 (CCPA 1955).

In regards to claim 28, although Larson does not specifically teach a plurality of parallel magnetic field planes, it has been held that duplication of parts has no significant patentable weight, absence of evidence to the contrary. See In re Harza, 124 USPQ 378 (CCPA 1960).

In regards to claim 29, Larson teaches the generating a magnetic field of variable amplitude by means of a pair of coils having a ferromagnetic core of various shapes (see col. 10, lines 3-14). Although Larson does not specifically teach the ferromagnetic core to be U-shaped or E-shaped, the reference does teach the core of various shapes. Therefore, it would have been obvious to one ordinary skill in the art that configurations of the core would have been an obvious design choice, depending upon operating conditions, and user's preference and intended use. See In re Boesch, 205 USPQ 215 (CCPA 1980); In re Antonie, 195 USPQ 6 (CCPA 1977); In re Aller, 105 USPQ 233, 235 (CCPA 1955).

In regards to claim 30-31, Larson teaches the medium to be treated being a limestone water (see col. 8, lines 21-23). Moreover, with respect to the fluid being used, it has been held that the material being worked upon would have little patentable weight in a process claim.

*Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 703-306-5698. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

tt  
tt

March 22, 2002



DONALD R. VALENTINE  
PRIMARY EXAMINER

GROUP 1100778